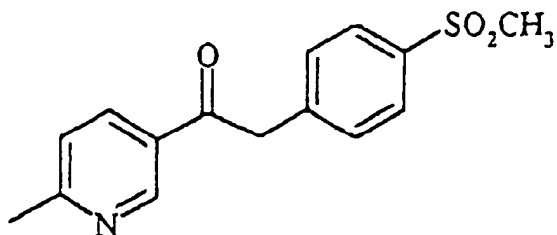


Patent claims

1. 1-(6-Methylpyridin-3-yl)-2-[(4-(methylsulfonyl)phenyl)ethanone of the formula

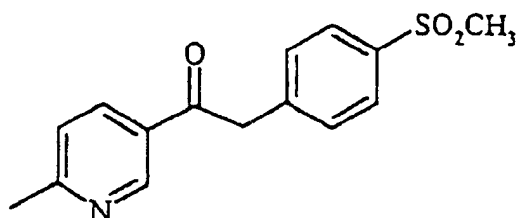
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I

2. A process for preparing 1-(6-methylpyridin-3-yl)-2-[(4-(methylsulfonyl)phenyl)ethanone of the formula

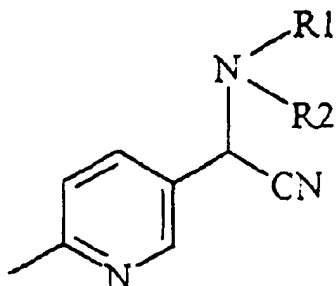
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I

wherein in a final reactions step a N,N-Dialkylamino-(6-methyl-3-pyridyl)acetonitril of the generic formula

15

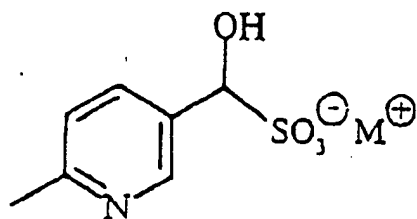


III

in which R¹ and R² are identical or different and are C₁₋₄-alkyl, is reacted with a 4-(methylsulfonyl)benzyl halide to give 1-(6-methylpyridin-3-yl)-2-[(4-(methylsulfonyl)phenyl)ethanone of the formula I.

20

3. A process as claimed in claims 2, wherein the base used is either an aqueous alkali metal hydroxide solution together with a phase-transfer catalyst or an alkali metal alkoxide in the presence of an organic solvent.
5
4. A process as claimed in claim 2 or 3, wherein the N,N-Dialkylamino-6-methyl-3-pyridyl)acetonitrile of the generic formula III is produced by reacting a 2-Methylpyridine-5-carbaldehyde with a Dialkylamine and a cyano compound.
10
5. A process as claimed in claim 4, wherein the cyano compound is an aqueous HCN solution or an aqueous solution of an alkali metal cyanide.
15
6. A process as claimed in claims 4 or 5, wherein the temperature for the reaction of the 2-methylpyridine-5-carbaldehyde with the dialkylamine and the cyano compound is from 0°C to 30°C.
20
7. A process as claimed in any of claims 4 or 6, wherein the 2-Methyl-pyridine-5-carbaldehyde is produced by reacting 2-Methyl-5-vinylpyridine with Ozone and subsequent reduction.
25
8. A process as claimed in claim 2, wherein the reaction of 2-methyl-5-vinylpyridine with ozone is carried out in the presence of a mineral acid, preferably at a temperature of from -20°C to 0°C.
30
9. A process as claimed in claim 2 or 3, wherein the reduction is carried out using an alkali metal hydrogen sulfite, with formation of 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt of the formula II
35

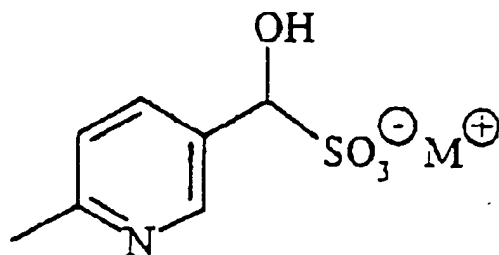


II

in which M is an alkali metal.

10. A process as claimed in claim 9, wherein the
5 reduction is carried out at a temperature of from -20°C to 20°C .
11. A process as claimed in claim 9 or 10, wherein the
10 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt is used without isolation for preparing the N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile of the formula III.
12. A process as claimed in any of claims 7 to 11,
15 wherein the 2-methyl-5-vinylpyridine is obtained using 2-methyl-5-ethylpyridine as starting material.
13. A process as claimed in claim 12, wherein 2-
20 methyl-5-ethylpyridine is converted at from 500°C to 700°C in the presence of a catalyst into 2-methyl-5-vinylpyridine.
14. A process as claimed in claim 13, wherein the
25 catalyst used is a silica, silica gel, iron oxide, zinc oxide, chromium oxide, copper chromite, magnesium oxide, potassium oxide, aluminum oxide or borophosphate, on its own or as a mixture, being applied to a support if appropriate.
15. A process as claimed in claim 13 or 14, wherein
30 the reaction is carried out at a temperature of from 600°C to 700°C .

16. A 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt of the formula



II

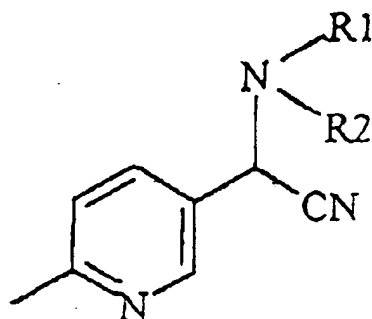
5

in which M is an alkali metal.

17. A process for preparing a 1-hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt as claimed in claim 14, characterized in that 2-methyl-5-vinylpyridine is, by reaction with ozone and subsequent reduction with an alkali metal hydrogen sulfite, converted into the end product of the formula II.

15

18. A N,N-dialkylamino-(6-methyl-3-pyridyl)-acetonitrile of the formula



III

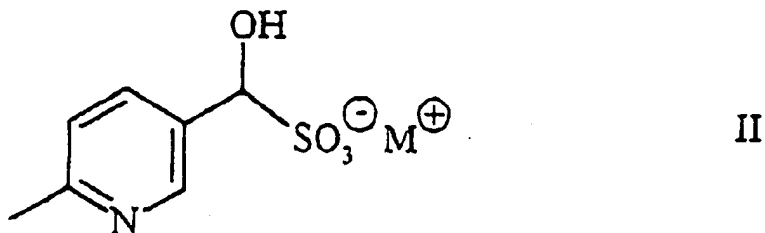
20

in which R¹ and R² are identical or different and are C₁₋₄-alkyl.

19. A process for preparing a N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile as claimed in claim 18, wherein 2-methylpyridine-5-carbaldehyde or 1-

25

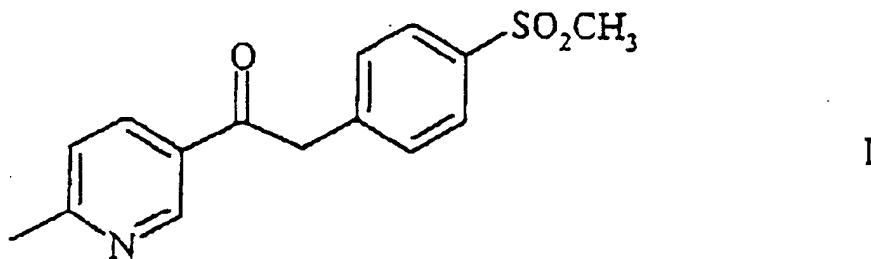
hydroxy-(6-methylpyridin-3-yl)methanesulfonic acid salt, of the formula II



5

is reacted with a dialkylamine and a cyano compound to give the end product of the formula III.

- 10 20. A process for preparing 1-(6-methylpyridin-3-yl)-2-[(4-(methylsulfonyl)phenyl)ethanone of the formula



15

wherein

in a first step a), 2-methyl-5-ethylpyridine is converted at from 500°C to 700°C in the presence of
20 a catalyst into 2-methyl-5-vinylpyridine,

in a second step b), the 2-methyl-5-vinylpyridine is, by reaction with ozone and subsequent reduction, converted into 2-methylpyridine-5-carbaldehyde,
25

in a third step c), 2-methylpyridine-5-carbaldehyde is converted, using a dialkylamine

and a cyano compound, into the corresponding N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile, and finally,

5 in a last step d), the N,N-dialkylamino-(6-methyl-3-pyridyl)acetonitrile is reacted in the presence of a base with a 4-(methanesulfonyl)benzyl halide to give 1-(6-methylpyridin-3-yl)-2-[(4-(methanesulfonyl)phenyl)ethanone.